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(54) Title: **CARDIOPROTECTIVE THERAPIES BASED ON ENZYMATIC ELIMINATION OF LIPID PEROXIDES BY ALLENE OXIDE SYNTHASE**

(57) Abstract: The present invention relates to methods and compositions related to the use of enzymes of the allene oxide synthase family for reducing myocardial ischemia reperfusion injury associated with myocardial infarction, thrombolysis, angioplasty and coronary bypass surgery. The methods of the invention comprise administration of allene oxide synthases, which are capable of eliminating lipid hydroperoxides, as a potent cardioprotective agent. The invention is based on the discovery that administration of allene oxide synthase following severe global ischemia stimulates cardiac recovery.

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61K 38/00

US CL : 514/2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 514/2

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,132,711 A (BACKHAUS et al.) 17 October 2000 (17.10.2000), see column 16,	1-6
---	lines 47-50.	-----
X		7

☐ Further documents are listed in the continuation of Box C.☐ See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
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"O"	document referring to an oral disclosure, use, exhibition or other means		
"P"	document published prior to the international filing date but later than the priority date claimed		

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